

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor : Sateesh Andra et al.	
Filed : Herewith	Group Art Unit:
For : IMPROVED METHOD FOR AUTONEGOTIATING MULTIPLE DEVICES WITH A SHARED AUTONEGOTIATION CONTROLLER	Examiner:
Docket No.: L13.12-0185/C2-4012/1C/1C	

PRELIMINARY AMENDMENT

Express Mail No. EL844351577US
Date of Deposit: December 7, 2001

Commissioner for Patents
Washington, D.C. 20231

Sir:

Prior to the first Official Action, it is respectfully requested that the following amendments be made.

IN THE TITLE

Please change the title to --IMPROVED METHOD FOR AUTONEGOTIATING MULTIPLE DEVICES WITH A SHARED AUTONEGOTIATION CONTROLLER--.

IN THE SPECIFICATION

On page 1, line 3, please insert the following heading and paragraph:

--CROSS REFERENCE TO RELATED APPLICATION

This application is a continuation application of United States Patent Application No. 09/092,389, filed on June 5, 1998 entitled MULTIPLE CHANNEL COMMUNICATION SYSTEM WITH SHARED AUTONEGOTIATION CONTROLLER.--

IN THE CLAIMS

Please add new claims 15-19 as follows:

15.(New) A method of autonegotiating communication configuration information through a plurality of communication devices with a shared autonegotiation controller, the method comprising:

prior to initiating autonegotiation for a first of the plurality of communication devices, ceasing network communication to cause the first of the plurality of communication devices to recognize a link_fail condition;

autonegotiating the first of the plurality of communication devices;

determining whether a second of the plurality of communication devices changed status during autonegotiation of the first of the plurality of communication devices; and

autonegotiating the second of the plurality of communication devices without ceasing network communication with the second of the plurality of communication devices if the status of the second of the plurality of network communication devices did not change during autonegotiation of the first of the plurality of network communication devices.

16.(New) The method of claim 15 wherein the step of ceasing network inactivity comprises ceasing network communication for an interval corresponding to break_link_timer.

17.(New) The method of claim 16 wherein the duration of break_link_timer comprises an interval between approximately 1200 milliseconds and approximately 1500 milliseconds.

18.(New) A method of sequentially autonegotiating a plural number of ports with a shared autonegotiation controller, the method comprising:

steps for sequentially autonegotiating the ports; and
steps for initiating a break_link_timer a number of
iterations that is less than the plural number of
ports.

19.(New) A method for autonegotiating communication configuration
information through a plurality of communication devices utilizing
a shared autonegotiation controller, the method comprising:

ceasing network communication between a shared
autonegotiation controller and a first network device
in order to cause the first network device to
recognize a link_fail condition;

autonegotiating communication information between the
autonegotiation controller and the first network
device; and

selectively ceasing network communication between the
autonegotiation controller and the second network
device based upon status of the second network device
during autonegotiation of the first network device.

Please cancel claims 1-14.

REMARKS

This Preliminary Amendment essentially pursues claims 15-18 which were cancelled in the parent application. Additionally, new claim 19 is also submitted which has heretofore not been examined. Support for new claim 19 can be found at page 23, lines 9 - 15; and page 28, lines 18 - 27. With respect to claims 15-18, Applicants respectfully submit that these claims are identical to original claims 15-18 which were rejected in an Office Action mailed August 28, 2001 in the parent application. Thus, Applicants respectfully submit that no new matter has been added.

With respect to claim 15 the Office Action indicated that this claim was rejected under 35 U.S.C. § 102(e) as being anticipated by Patel et al. (U.S. Patent No. 6,148,002). The Office Action indicated that Patel et al. allegedly disclose, among other things, "autonegotiating the second of the plurality of communication devices without ceasing network communication with the second of the plurality of communication devices if the status of the second of the plurality of network communication devices did not change during autonegotiation of the first of the plurality of network communication devices." The Office Action cited column 3, lines 8-48 as teaching the above quoted limitation. Respectfully, the cited portion of Patel et al. simply describes round-robin autonegotiation. Thus, if a port should fail, the master state machine will recognize that the port has gone down and connect the shared autonegotiation state machine the appropriate port. Essentially, neither the cited portion of Patel et al., nor the entire disclosure of Patel et al. teach or suggest selectively autonegotiating without ceasing network communication as set forth in claim 15. Applicants submit that autonegotiation in general will generate a lull in network communication prior to autonegotiation. The standard itself describes this. In contrast, Applicants have

appreciated that the sequential autonegotiation of a number of network devices need not invoke the break_link_timer for each and every device autonegotiated. This is done by specifically determining if at least one break_link_timer lull has expired for the next port to be autonegotiated. Thus, Applicants respectfully submit that the features of independent claim 15 are not shown. Specifically, Patel et al. do not teach or suggest autonegotiating the second of the plurality of communication devices without ceasing network communication with the second of the plurality of communication devices if the status of the second of the plurality of network devices did not change during autonegotiation of the first of the plurality of network communication devices. Thus, Applicants respectfully submit that claim 1 is neither taught nor suggested by Patel et al.

Claims 16-18 (original claims 16-18) were rejected under 35 U.S.C. § 103(a) as being unpatentable over Patet et al. in view of Julyan (U.S. Patent No. 5,809,249). With respect to these claims, the Office Action admitted that Patet et al. does not explicitly disclose "initiating a break_link_timer." The Office Action then proceeded to find the break_link_timer in the disclosure of Julyan. Applicants respectfully submit that a break_link_timer is also set forth in the autonegotiation clause described in Applicants' Specification. Thus, it is not the inclusion of break_link_timer that is the emphasis of Applicants' claims, but instead how the break_link_timer is executed. For example, Applicants note that Julyan teaches that "ME 48 sets a break_link_timer for a predetermined amount of time and waits for the time to expire. During this time, all of the other PMD interface devices 46 must disable their link integrity signaling (i.e. stop transmitting link pulses, etc.) to ensure that when the time expires all remote link partners PMD interface devices 42 will have entered their link_fail state." See column 4, lines 56-62. Thus, Julyan generates a lull to cause all devices to recognize a link_fail condition. The

distinction between these two references and the claims is that the status of a second device is checked prior to autonegotiation to determine if break_link_timer must be re-executed notwithstanding the fact that it had been previously executed upon a port. This distinction is important for the following situation. Assume, for example, that all ports are brought up through successful autonegotiation. Then, a pair of ports fail and require re-autonegotiation. In this instance, the autonegotiation requests for both ports is generated before break_link_timer is executed for the first of the ports. If upon completion of autonegotiation of the first port, the second port still requires autonegotiation, autonegotiation of the second port will proceed without execution of the break_link_timer. See page 12, line 25 through page 13, line 18 of Applicants' Specification. However, if during autonegotiation of the second port, a third port should require autonegotiation, then the break_link_timer will be executed for that port since at least one such time period has not expired since the request of the third port. This specific status monitoring and selective execution of break_link_timer is neither taught nor suggested by Patel et al. nor Julyan taken alone or in combination. Thus, Applicants respectfully submit that claims 15-18 are allowable over Patel et al. and Julyan.


With respect to new claim 19, Applicants respectfully believe that this claim includes features specifically directed to the distinctions set forth above. Thus, Applicants respectfully believe that claim 19 is allowable as well.

Consideration and entry of this Preliminary Amendment are respectfully requested.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to deposit account No. 23-1123.

Respectfully submitted,

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MARKED-UP VERSION OF REPLACEMENT PARAGRAPHS

On page 1, line 3, please insert the following heading and paragraph:

--CROSS REFERENCE TO RELATED APPLICATION

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